



Strategies for Supportability and Interoperability

NDIA Systems Engineering Conference

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Designing Unmanned Systems for Supportability and Interoperability

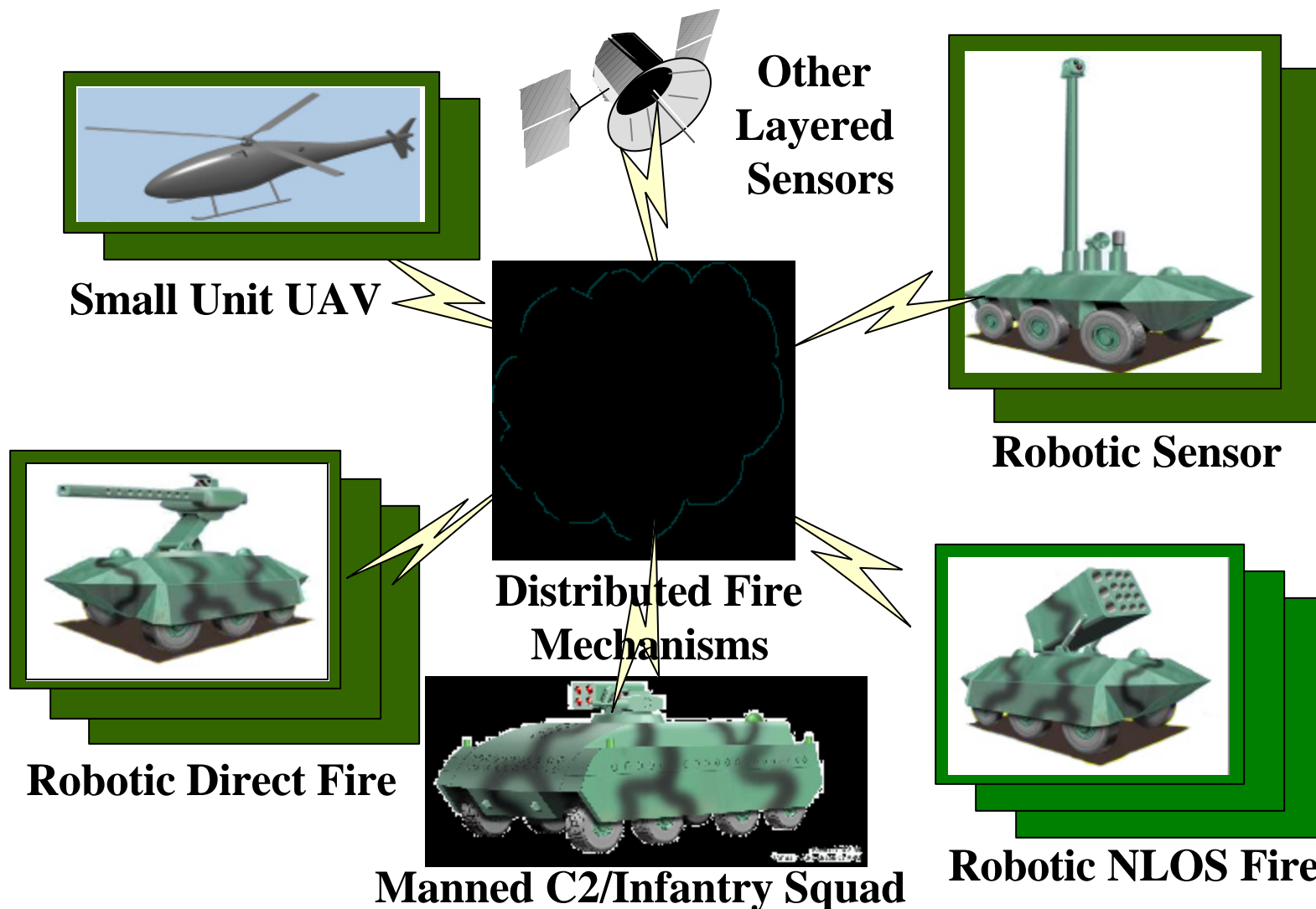


- Design of combined manned/unmanned system
 - Focus on mission(s)
 - Key Questions:
 - How much autonomy?
 - Supportability?
 - Modularity?



DARPA Vision for FCS

A Distributed, Network Centric System of Systems





UCAV System Concept



- Revolutionary New Tactical Airpower
 - Force Enabler - Preemptive and Reactive SEAD
 - Provide Persistent All Weather Strike Capability
 - Augment Manned Force Structure
 - New CONOPS for High Risk or High Payoff Missions

- New Paradigm in Aircraft Affordability
 - Reduced Acquisition Costs (<1/3 JSF)
 - Dramatically Lower O&S Cost (>75% Reduction)
 - Maintain Mixed Force Structure

- Prosecution of Advanced IADS & Time Critical Targets
- High Survivable Design For First Day Penetration



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UCAV Demonstrator System





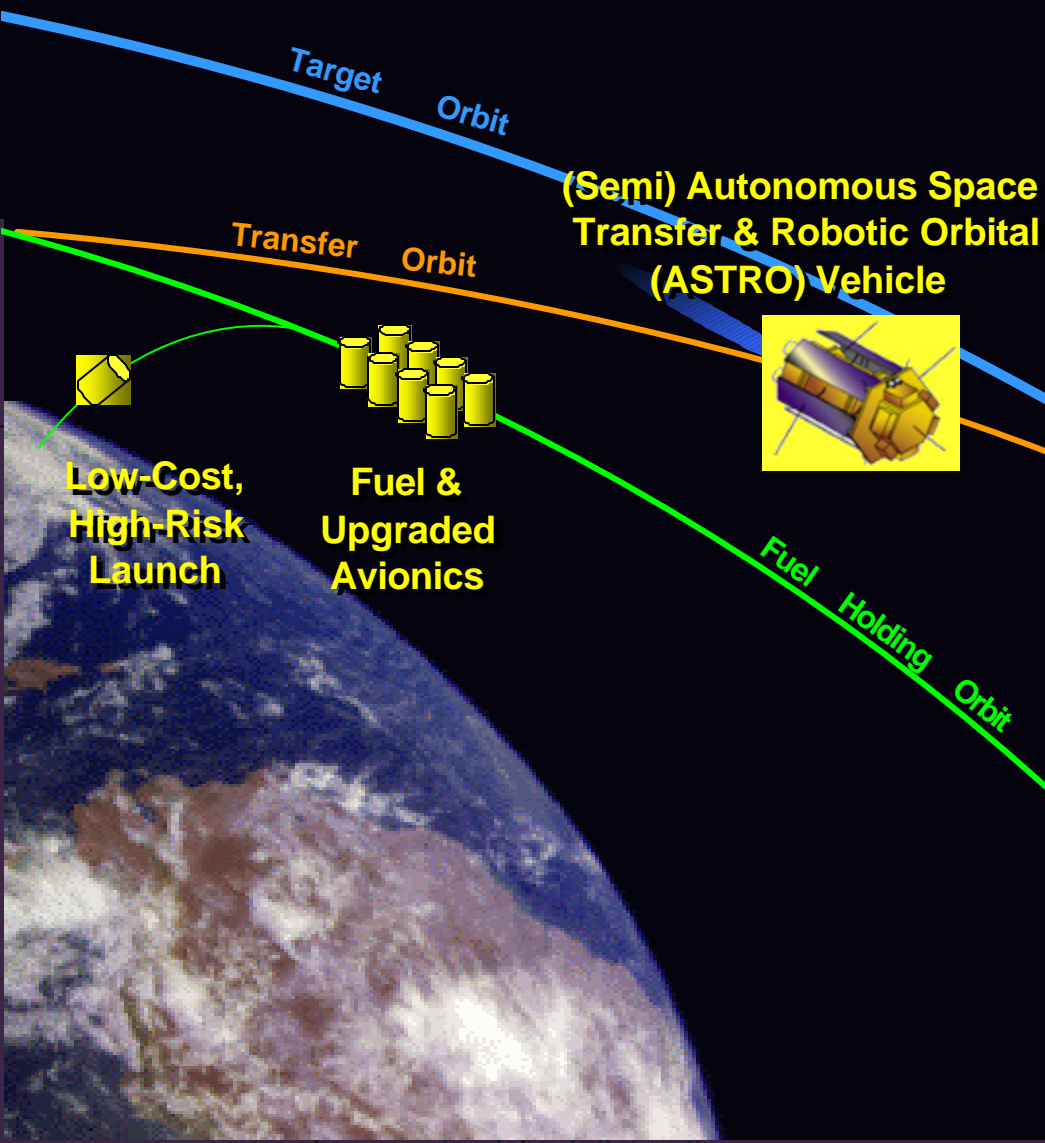
Hummingbird Vehicle Concept



Weight	Length	Rotor Diameter	Ceiling	Range	Endurance
4,000 lb	35 ft	36 ft	30,000+ ft	2500+ nm	40+ hr



Orbital Express System Concept



Orbital Express Enables

- **Fly Satellites** — Strategic & Tactical Mobility
- **Space Comm** — Satellite Rep, Satellite Avio

**NEXTSAT - Refuelable/
Upgradeable Spacecraft
with Plug & Stay Module**

